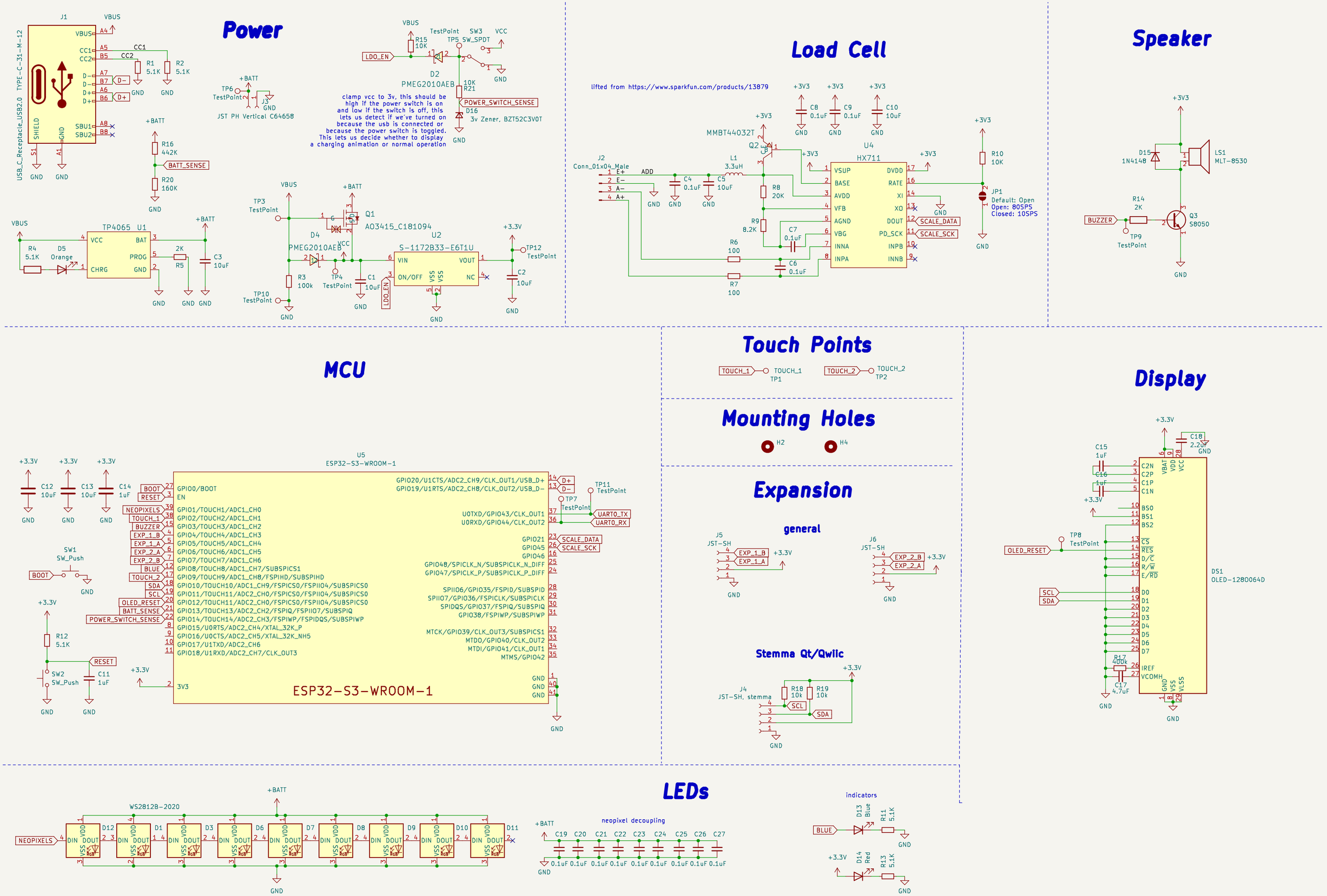
Power
Load Cell
Speaker
MCU
Touch Points
Mounting Holes
Expansion
Display
LEDs
J1
USB_C_Receptacle_USB2.0 TYPE-C-31-M-12
VBUS
CC1
CC2
R1 5.1K
R2 5.1K
D-
D+
SHIELD
GND
R16 442K
R20 160K
BATT_SENSE
+BATT
TP6 TestPoint
J3
JST PH Vertical C64658
R15 10K
LDO_EN
TP5 TestPoint
SW3 SW_SPDT
VCC
D2 PMEG2010AEB
R21 10K
POWER_SWITCH_SENSE
D16 3v Zener, BZT52C3V0T
clamp vcc to 3v, this should be high if the power switch is on and low if the switch is off, this lets us detect if we've turned on because the usb is connected or because the power switch is toggled. This lets us decide whether to display a charging animation or normal operation
TP4065 U1
VCC
BAT
PROG
CHRG
R4 5.1K
D5 Orange
2K R5
C3 10uF
TP3 TestPoint
Q1 AO3415_C181094
D4 PMEG2010AEB
R3 100k
TP10 TestPoint
TP4 TestPoint
C1 10uF
U2 S-1172B33-E6T1U
VIN
VOUT
ON/OFF
NC
VSS
+3.3V
TP12 TestPoint
C2 10uF
lifted from https://www.sparkfun.com/products/13879
C8 0.1uF
C9 0.1uF
C10 10uF
MMBT44032T
Q2
J2 Conn_01x04_Male
E+
E-
A-
A+
ADD
C4 0.1uF
C5 10uF
L1 3.3uH
R8 20K
R9 8.2K
C7 0.1uF
R6 100
R7 100
C6 0.1uF
U4 HX711
VSUP
BASE
AVDD
VFB
AGND
VBG
INNA
INPA
DVDD
RATE
XI
XO
DOUT
PD_SCK
INPB
INNB
SCALE_DATA
SCALE_SCK
R10 10K
JP1
Default: Open
Open: 80SPS
Closed: 10SPS
D15 1N4148
LS1 MLT-8530
R14 2K
BUZZER
TP9 TestPoint
Q3 S8050
C12 10uF
C13 10uF
C14 1uF
U5 ESP32-S3-WROOM-1
GPIO0/BOOT
EN
GPIO1/TOUCH1/ADC1_CH0
GPIO2/TOUCH2/ADC1_CH1
GPIO3/TOUCH3/ADC1_CH2
GPIO4/TOUCH4/ADC1_CH3
GPIO5/TOUCH5/ADC1_CH4
GPIO6/TOUCH6/ADC1_CH5
GPIO7/TOUCH7/ADC1_CH6
GPIO8/TOUCH8/ADC1_CH7/SUBSPICS1
GPIO9/TOUCH9/ADC1_CH8/FSPIHD/SUBSPIHD
GPIO10/TOUCH10/ADC1_CH9/FSPICS0/FSPIIO4/SUBSPICS0
GPIO11/TOUCH11/ADC2_CH0/FSPICS0/FSPIIO4/SUBSPICS0
GPIO12/TOUCH11/ADC2_CH0/FSPICS0/FSPIIO4/SUBSPICS0
GPIO13/TOUCH13/ADC2_CH2/FSPIQ/FSPIIO7/SUBSPIQ
GPIO14/TOUCH14/ADC2_CH3/FSPIWP/FSPIDQS/SUBSPIWP
GPIO15/U0RTS/ADC2_CH4/XTAL_32K_P
GPIO16/U0CTS/ADC2_CH5/XTAL_32K_NH5
GPIO17/U1TXD/ADC2_CH6
GPIO18/U1RXD/ADC2_CH7/CLK_OUT3
GPIO20/U1CTS/ADC2_CH9/CLK_OUT1/USB_D+
GPIO19/U1RTS/ADC2_CH8/CLK_OUT2/USB_D-
U0TXD/GPIO43/CLK_OUT1
U0RXD/GPIO44/CLK_OUT2
GPIO21
GPIO45
GPIO46
GPIO48/SPICLK_N/SUBSPICLK_N_DIFF
GPIO47/SPICLK_P/SUBSPICLK_P_DIFF
SPIIO6/GPIO35/FSPID/SUBSPID
SPIIO7/GPIO36/FSPICLK/SUBSPICLK
SPIDQS/GPIO37/FSPIQ/SUBSPIQ
GPIO38/FSPIWP/SUBSPIWP
MTCK/GPIO39/CLK_OUT3/SUBSPICS1
MTDO/GPIO40/CLK_OUT2
MTDI/GPIO41/CLK_OUT1
MTMS/GPIO42
3V3
ESP32-S3-WROOM-1
BOOT
RESET
NEOPIXELS
TOUCH_1
BUZZER
EXP_1_B
EXP_1_A
EXP_2_A
EXP_2_B
BLUE
TOUCH_2
SDA
SCL
OLED_RESET
BATT_SENSE
POWER_SWITCH_SENSE
TP7 TestPoint
TP11 TestPoint
UART0_TX
UART0_RX
SCALE_DATA
SCALE_SCK
SW1 SW_Push
R12 5.1K
SW2 SW_Push
C11 1uF
TOUCH_1
TOUCH_1 TP1
TOUCH_2
TOUCH_2 TP2
H2
H4
J5 JST-SH
J6 JST-SH
general
J4 JST-SH, stemma
R18 10k
R19 10k
Stemma Qt/Qwiic
C15 1uF
C16 1uF
C18 2.2uF
C17 4.7uF
R17 400k
TP8 TestPoint
OLED_RESET
DS1 OLED-128O064D
C2N
C2P
C1P
C1N
VBAT
VDD
VCC
BS0
BS1
BS2
CS
RES
D/C
R/W
E/RD
D0
D1
D2
D3
D4
D5
D6
D7
IREF
VCOMH
VSS
VLSS
WS2812B-2020
D12
D1
D3
D6
D7
D8
D9
D10
D11
DIN
DOUT
neopixel decoupling
C19
C20
C21
C22
C23
C24
C25
C26
C27
0.1uF
indicators
D13 Blue
R11 5.1K
D14 Red
R13 5.1K
GND